

REMARKS**INTRODUCTION**

In accordance with the foregoing, claims 27 and 34 have been amended. No new matter has been submitted and reconsideration of the allowability of the pending claims is respectfully requested.

Claims 1-38 are pending, with claims 1-8, 15-21, and 27-33 being under consideration. Claims 9-14, 22-26, and 34-38 have been withdrawn from consideration by the Office Action.

REJECTIONS UNDER 35 USC 112

Claims 7, 8, 20, 21, and 32 and 33 stand rejected under either 35 USC 112 first or second paragraphs. In particular, the Office Action believes that the recited reference values of "less than 18 nm" and "greater than 14 nm" are not supported by the specification, since the specification only sets forth a range for the reference value of between 14 and 18 nm.

Applicants respectfully disagree with the Office Action interpretation of the extent of the specification disclosure. The specification clearly details that an upper limit of the DVD-R/-RW disc is 14 nm and that a lower limit for a DVD+R/+RW disc was 18 nm, in addition to the Office Action cited range 14-18 nm. This cited range refers to an available range for the 'about 16' in claim 31, for example. However, in addition to this range the specification clearly provides support for a range for defining the DVD-R/-RW or DVD+R/+RW discs. See paragraphs [0030] and [0040] of the present specification, for example.

Inherently, if the reference value is less than 18 nm, then a detected amplitude above this reference value may indicate the presence of a DVD+R/+RW disc. Likewise, a detected amplitude below such a "less than 18 nm" may indicate the presence of a DVD-R/-RW disc.

Similarly, if the reference value is greater than 14 nm, then a detected amplitude below this reference may indicate the presence of a DVD-R/-RW disc. Likewise, a detected amplitude above such a "greater than 14 nm" may indicate the presence of a DVD+R/+RW disc.

These above/below reference determinants are clearly supported by the specification, at least based upon the upper identified range of the DVD-R/-RW disc and the lower identified range of the DVD+R/+RW disc. Accordingly, one skilled in the art would clearly understand that such a reference determinant is equally supported and disclosed by the same portion of the specification.

Accordingly, withdrawal of this rejection is respectfully requested.

The Office Action further mentions that claims 34-38 stand rejected under 35 USC 101.

However, as also noted in the Office Action, these claims have been withdrawn from consideration. If the Office Action meant to maintain these claims for consideration, and reject the same under 35 USC 101, applicants respectfully request that the previous restriction of these claims be withdrawn. Otherwise, applicants believe that this rejection may have been made in error.

Regardless, as the language of these claims may have been misinterpreted in the Office Action, applicants have amended the same to claim the medium comprising computer readable code to implement a method, with the method being further defined.

Applicants respectfully submit that such language meets 101 statutory requirements, and respectfully request withdrawal of this rejection.

REJECTIONS UNDER 35 USC 102

Claims 1-4, 15, 18, 27, and 30 stand rejected under 35 USC 102 as being anticipated by Yoshida et al., U.S. Patent No. 5,764,610. This rejection is respectfully traversed.

By way of review and only as an example, independent claim 1 sets forth:

"A recording medium type discriminating apparatus, comprising:

a radio frequency (RF) amplifier to output a signal based on light reflected from a recording medium;

a wobble amplitude detector to detect an amplitude of a wobble formed on the recording medium based on an output signal of the RF amplifier; and

a system controller to discriminate a recording medium type of the recording medium by comparing the wobble amplitude with a reference value."

In particular, independent claim 1 sets forth at least the detecting of "an amplitude of a wobble formed on the recording medium" and discriminating the recording medium type of the recording medium "by comparing the wobble amplitude with a reference value." The remaining independent claims under consideration include at least similar features, with differing scope and breadth.

Thus, the claimed discrimination of the recording medium type must be based upon a comparing of the wobble amplitude, as "formed on the recording medium", and a reference value.

The Office Action indicates that Yoshida et al. discloses this claimed feature, referencing FIGS. 1 and 2 and related discussions of the same. Applicants respectfully disagree with the Office Action's interpretation of Yoshida et al.

Conversely to the claimed basing of the recording medium type determination on a comparison of the wobble amplitude with a reference value, Yoshida et al. actually sets forth comparing a frequency of the wobble with a reference value.

In particular, Yoshida et al. focuses on identifying whether a frequency of the wobble is within a defined range, e.g., around 22KHz.

If the frequency is identifiable as being within the defined range, then the optical disc can be identified as being a DVD-R disc, and if the frequency is not identifiable as being within the defined range, then the optical disc can be identified as being a CD-R disc.

Further, in Yoshida et al., the frequency of the wobble is not directly measured. Rather, a band pass filter 91 is applied to a push/pull signal. After this filtering, if there is any amplitude shown in the filtered signal the wobble frequency can be determined as being within the defined band pass range of the filter. Similarly, if insufficient voltage, or a voltage below a reference voltage, is identifiable after such a filtering, the original wobble frequency can be determined to have been outside of the band pass range of the filter.

Thus, as shown in FIG. 2 of Yoshida et al., the push/pull signal is filtered by BPF 91, and then a peak of that filtered signal is captured by the peak hold circuit 92.

At this point, the resultant filtered and peak held value is compared with reference voltages by comparators 93 and 94.

However, conversely to the interpretation of the Office Action, this resultant filtered and peak held value being compared with reference voltages cannot be considered equivalent to the comparing of the amplitude of the wobble "formed on the recording medium and a reference value.

Here, in addition to the above reliance on the comparison of the push/pull signal amplitude and a reference voltage to read on the claimed comparing of the wobble amplitude and a reference value, the Office Action appears to have further relied upon the amplitude of the push/pull signal of Yoshida et al. as reading on the claimed amplitude of the wobble formed on the recording medium.

However, the amplitude of the wobble "formed on the recording medium" references the wobble itself, and its amplitude on the recording medium. The present application clearly supports this interpretation of "amplitude of the wobble," and any reasonable interpretation of the same cannot use any interpretation or definition of amplitude of the wobble inconsistent with the

same. See paragraph [0029] and FIG. 2 of the present specification for consistent examples.

At most, in Yoshida et al., the peak value of a filtered push/pull signal at only 22KHz is passed through to a comparator. However, again, the peak value of the filtered push/pull signal is not the same as the amplitude of the wobble formed on the recording medium. Further, this resultant peak value at 22 KHz may similarly not be considered equivalent to any detected amplitude of any RF signal derived from the wobble. The relied upon voltage has been filtered for a particular frequency range and peak held, which alters the characteristics of the original RF signal.

Thus, Yoshida et al. both fails to disclose the claimed detecting of the amplitude of the wobble formed on the recording medium and the claimed comparing of that amplitude with a reference value.

Yoshida et al. merely uses a band pass filter and the push/pull signal to identify whether a wobble is detected within the band pass range of the filter, e.g., 22 KHz. If a sufficient portion of the push/pull signal exists after the filtering, then the optical disc can be categorized as having 22 KHz wobble. If an insufficient portion of the push/pull signal exists after the filtering, then the optical disc can be categorized as a disc that does not have a 22 KHz wobble.

Thus the on/off indicator of the 22 KHz wobble frequency is not the same as the claimed detecting of "the amplitude of a wobble formed on the recording medium" and the comparing of that amplitude with a reference value to determine the recording medium type.

Accordingly, it is respectfully submitted that Yoshida et al. fails to suggest or disclose the claims 1-4, 15,18, 27, and 30.

Withdrawal of this rejection is respectfully requested.

REJECTIONS UNDER 35 USC 103

Claims 5-8, 16-17, 19-21, 28-29, and 31-33 stand rejected under 35 USC 103(a) as being obvious over Yoshida et al., in view of Morita, U.S. Patent No. 6,207,247. This rejection is respectfully traversed.

The Office Action relies upon Yoshida et al. to disclose all the claimed features of claims 5-8, 16-17, 19-21, 28-29, and 31-33, except for the claimed ranges of wobbles, which the Office Action relies upon Morita to disclose wobble amplitudes in a dvd+rw disc and further argues that a dvd-rw disc range would similarly be derivable.

The Office Action sets forth that such a use of such ranges in Yoshida et al. would have been obvious "in order to set an appropriate threshold value, or ranges of values that are

indicative of the breaking point between dvd-rw and dvd+rw amplitude[s]. Selection of such is an optimization of the system and obvious predicated upon the well known dvd-rw amplitude range."

Regardless of any wobble amplitude disclosures of Morita, it is respectfully submitted that such disclosures are unnecessary in the original system of Yoshida et al. Further, applicants respectfully submit that the reliance on "an optimization of the system" and "predicated upon the well known dvd-rw amplitude range" are both vague and conclusions of the Examiner not supported by the record.

There is insufficient support in the record to evidence that Yoshida et al. would need or desire to be modified to accommodate different wobble amplitude ranges.

Conversely, as noted above, Yoshida et al. sets forth a simplified method of determining the type of media based upon the frequency of the wobbles, with that simplified method including using a filter to filter out all frequencies except a frequency used in a particular optical disc and determine whether any signal results after such a filtering, evidencing a wobble within the band pass of the filter. If the wobble frequency exists, then that media is of the corresponding optical disc with the expected wobble frequency.

There is no support in the record that Yoshida et al. takes into consideration the actual amplitude of the wobble as formed on the recording medium.

Further, there is no support in the record that the reference voltage in Yoshida et al. has any relationship with any expected amplitude of a wobble formed on the recording medium.

Conversely, the focus of the reference voltage in Yoshida et al. is to discern how much of the push/pull signal got through the band pass filter. If enough of the signal got through, then the corresponding optical disc type with the corresponding band pass frequency will be selected. See col. 4, lines 51-66 of Yoshida et al.

Thus, in Yoshida et al. the reference voltage is merely chosen based upon an expected band pass filtering result, of high or low. With the band pass filter, non-desired frequencies will be filtered out to zero.

Similarly, claim 17 refers to detecting a peak-to-peak value of a detected RF signal, and identifying the amplitude as being the peak-to-peak value (claims 18 and 29 similarly include such peak-to-peak language). However, Yoshida et al. fails to disclose or suggest the measuring of a peak-to-peak voltage of the input RF signal. Rather, in Yoshida et al., there is less desire for the actual value of the filtered and peaked signal than any indication that the same filtered and

peaked signal is non-zero. A non-zero indication identifies that some of a 22 KHz wobble RF signal was passed through the filter, indicating that a 22 KHz wobble was detected.

Accordingly, there is no evidence in the record that discloses or suggest that the wobble amplitudes discussed in Morita would have any relevance with the system of Yoshida et al. It is respectfully submitted that it would not have been obvious to modify Yoshida et al. as proffered in the Office Action.

Withdrawal of this rejection is respectfully requested.

CONCLUSION

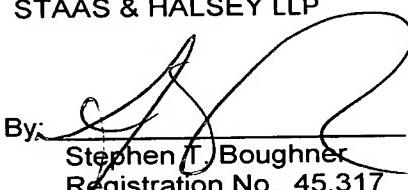
There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

STAAS & HALSEY LLP

By: 
Stephen T. Boughner
Registration No. 45,317

Date: 10/5/06
1201 New York Avenue, NW, 7th Floor
Washington, D.C. 20005
Telephone: (202) 434-1500
Facsimile: (202) 434-1501